

STATE OF MINNESOTA
COUNTY OF RAMSEY

DISTRICT COURT
SECOND JUDICIAL DISTRICT
Case Type: Other Civil

Nancy Leppink, in her official capacity as
Commissioner of the Minnesota Department of
Labor and Industry, Jan Malcolm, in her
official capacity as Commissioner of the
Minnesota Department of Health,

**DECLARATION OF DR. ABBY
MONTAGUE, M.D.**

Plaintiffs,

vs.

Water Gremlin Company,

Defendant.

Dr. Abby Montague declares as follows:

1. I am a medical doctor licensed as a physician and surgeon by the State of Minnesota Board of Medicine. I am a graduate of the University of Minnesota Medical School. I completed my residency in pediatrics at the University of Minnesota in Minneapolis, Minnesota. I completed my fellowship in medical toxicology at Health Partners Institute in St. Paul, Minnesota. I am board certified in pediatrics and medical toxicology by the American Board of Medical Specialties.

2. I currently practice as a pediatric hospitalist at Hennepin County Medical Center in Minneapolis, Minnesota and Children's Hospitals and Clinics in Minneapolis, Minnesota. I am one of the Core Medical Toxicology Faculty associated with the Minnesota Poison Control System. I provide patient care to children and adults exposed to poisons and toxic substances, including lead. I also advise and consult with other physicians in the treatment of childhood lead

poisoning. I am also an Assistant Professor of Pediatrics at the University of Minnesota Medical School. I am the only toxicology-trained pediatrician in the State of Minnesota.

3. Lead is a natural occurring heavy metal. Lead is soft and malleable with a relatively low melting point. Lead is a potent occupational toxin and its toxicological manifestations are well known. There is no level of lead exposure that appears to be necessary or beneficial to the body and no “safe” level of exposure to lead has been found. Lead toxicity is a particularly insidious hazard with the potential of causing irreversible health effects.

4. Lead is absorbed by the body through both breathing and swallowing lead dust, as well as by swallowing objects made of lead. Lead is particularly dangerous to children because their growing bodies absorb more lead than adults (whether inhaled or swallowed) and children’s brains and nervous systems are more sensitive to the damaging effects of lead. Babies and young children can also be more highly exposed to lead because they often put their hands and other objects that can have lead from dust or soil on them into their mouths. Children absorb lead more readily through the digestive tract than adults.

5. There is no safe blood level of lead. However, a blood lead level of 5 mcg/dL is used to indicate a possibly unsafe level for children and represents a level much higher than the levels of most children.

6. Evidence that even very low level lead exposure adversely affects the neurobehavioral development of children is consistent and quite strong. Extensive data shows a direct link between low-level lead exposure during early development and deficits in neurobehavioral-cognitive performance evident late in childhood through adolescence. Even low blood lead levels can cause learning disabilities and problems with cognition and attention.

Children may have decreased intelligence and have difficulties with inattention and hyperactivity even at low lead exposure.

7. Children with greater blood lead levels may be affected with delayed growth, renal injury, short-term memory loss, and hearing loss. At high Blood Lead Levels, lead can cause permanent brain damage and even death. Even exposure at levels below what can be treated can have long-term impacts on childhood development.

8. Lead exposure can be difficult to detect because symptoms are subtle, develop slowly, and are similar to other common childhood conditions. Symptoms of lead exposure in children include developmental delays, learning difficulties, irritability, constipation, loss of appetite, abdominal pain, high blood pressure, fatigue, anemia, renal impairment, and hearing loss. Seizures and confusion can occur at life-threatening blood lead levels, but this is rare and likely to be missed when acutely managing a child with these symptoms.

9. A Blood Lead Level of 15 mcg/dL in a child is significant. Removing a child with that elevated lead level from the source of the lead is critical to prevent adverse health and cognitive effects. If a child continues to be exposed, lead can accumulate to higher levels in the body and the child is subject to unpredictable, ongoing developmental injury.

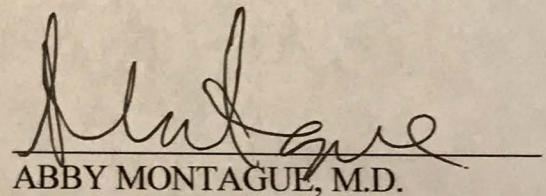
10. Because the half-life of lead in blood is approximately 35 days, a single blood lead measure during childhood might not accurately reflect the magnitude of exposure at an earlier age point, and this early exposure might have the strongest effects on brain development and function.

11. Pregnancy women and unborn children also at high risk from lead exposure. Pregnancy is a period of high susceptibility to the effects of lead for both the mother and the

unborn child. Studies have confirmed the transfer of lead from the mother to the fetus. Exposure to lead during pregnancy can cause miscarriage, premature birth, and birth defects.

12. Primary prevention of lead exposure is critical to allow children to live to their highest potential. The only available treatment for elevated blood lead levels is chelation therapy. In this treatment, a medication given by mouth binds with the lead so that it's excreted in urine. This treatment helps remove lead from the body. However, this treatment only makes minor improvements and only in those with blood lead levels over 45 mcg/dL. Chelation will not reverse already-existing damage. Most adverse effects of lead poisoning are permanent and irreversible.

I declare under penalty of perjury that everything I have stated in this document is true and correct.



ABBY MONTAGUE, M.D.

Signed October 27, 2019, in Anoka County, Minnesota